

Baer reports that in 191 cases of gonorrhea in women there was rectal involvement in 30%. From this it is apparent how important it is that a proper examination be made in these cases so that no involvement of the anus and rectum is overlooked, especially so when complaint is made of a sensation of heat and burning in the parts which is increased on defecation.

Uterine and bearing down pains, and backache, may be caused reflexly by a fissure of the anus.

In diseases of the male genito-urinary tract rectal examinations are of great assistance in arriving at a correct diagnosis. When an individual comes to the genito-urinary surgeon complaining of an irritable condition of the bladder, with a local sensation of burning, tenesmus, and frequent and painful micturition, it is well to remember, if no local cause be found, that a proctoscopic examination may disclose a chronic sigmoiditis as the causative factor, and all symptoms may cease after a thorough evacuation and treatment of the sigmoid. In some instances there may be in addition an undue amount of residual urine which disappears as soon as the fecal accumulation in the rectum is removed. Like symptoms may arise from the presence of a carcinoma in a sigmoid flexure.

Albu has written that beginning cancer of the prostate gland may cause pains in the rectal region which occur intermittently and gradually grow more severe. These pains are often mistaken for neuralgia of the rectum and the real condition is only discovered on rectal examination.

In some instances dysuria and vesical tenesmus can be relieved only after a rectal examination has shown that these symptoms are caused reflexly by inflamed hemorrhoids, perineal abscess, acute proctitis or dysentery.

Some cases of cystitis, as pointed out by Ware, are caused by bacteria which have invaded the bladder from the rectum. Examination possibly may show a condition of coprostasis with lesions of the rectal mucous membrane.

Marked enlargement of the inguinal ganglia without any apparent cause may be due to a chancre of the anus. When a patient complains of pain on defecation a chancre or a chancroid may be disclosed instead of the expected fissure.

Frequent and painful urination may be caused by a chronic intussusception of the sigmoid colon; also from a fissure of the anus. The latter may give rise to all the classical symptoms of a urethral stricture, and the urethra may receive treatment without avail until the anal lesion is discovered and treated. On the other hand a stone in the bladder or a urethral stricture may cause rectal symptoms only, and the true cause thereof can be found only after an examination has eliminated the presence of rectal disease.

Vesical, prostatic, urethral and seminal vesicle disturbances have been observed to result from local or reflex irritations from chronically retained fecal accumulations. A rectal examination will often clear up a vexatious problem for the genito-urinary surgeon.

In conclusion, I wish to urge that a digital, and if possible, an instrumental examination of the anus and rectum be made a routine procedure. A proc-

toscopic examination should follow especially when the examining finger has felt something abnormal, or when non-palpable conditions are suspected.

Although according to Mummery the use of the pneumatic sigmoidoscope is attended by no dangers whatever, Sultain has reported that several times the rectum has been ruptured by extreme inflation with air. It is advisable that individuals of lowered vitality, with marked relaxation of all muscles, in the presence of old inflammatory conditions, should not be subjected to proctoscopic examination.

Discussion.

Dr. Langley Porter, San Francisco: I wish to emphasize the value of rectal examinations when we have to deal with acute or chronic abdominal conditions in children, and especially in infants. One point the reader has omitted and that is that it is practically useless to make rectal examinations of young children except under an anesthetic. Under an anesthetic such conditions as suspected appendicitis can be cleared up and a diagnosis made very readily. In a child of 2 years the examining finger can explore the abdomen as far as the umbilicus if the child be well anesthetized. Especially is this true in cases of intussusception; the finger discovers the absence of the caput coli in the iliac fossa and finds the intussuscepted gut at some higher point.

Dr. G. B. Somers, San Francisco: From a gynecological standpoint the importance of an examination of the rectum goes without saying. In fact it should be a routine part of such examinations. I have been very much astonished to find how frequently a mistake is made, by practitioners who ought to know better, in taking the pressure of the cervix against the posterior vaginal wall for a foreign body. The patient complains of constipation, some heaviness or sensation of obstruction and the practitioner making the examination, forgetting how thin the septum is and feeling the body of the cervix, makes up his mind that he feels a foreign body or exudate or new growth. Again the mistake has been frequently made of taking this pressure of the cervix for retroversion. This simply illustrates how thin the recto-vaginal septum is and how easy it is to map out the pelvic organs through the rectum. In an unmarried woman rectal examination is permissible, and it will be found that the pelvic organs can be mapped out as well as through the vagina. Recently in examining the rectum and bowel higher up I have used the inverted position, having the patient practically standing on her head, the legs and thighs on the table, her head on the floor. With this method the bowel balloons out with the in-rushing air and one is able to examine as high as the sigmoid. In making rectal examinations there is no instrument equal to the Kelly speculum or some form of it.

FUNCTIONAL PERIODICITY IN WOMEN AND SOME OF THE MODIFYING FACTORS.

By CLELIA DUEL MOSHER, A. M., M. D., Palo Alto.

(Continued from Page 8, January issue 1911.)

1. Type of respiration. In April, 1894, Dr. G. W. Fitz of Harvard University reported⁹ to the Boston Society of the Medical Sciences and in May of the same year I presented a preliminary report¹⁰ for a Master's degree at Stanford University, on the normal type of the respiratory movements, in which we both derived the same general conclusions, although working independently. Until 1896 all the physiologies stated that men breathed abdominally and women costally; but these researches established the fact, now generally accepted, that

there is normally no difference between the sexes in the normal type of respiration. This discovery has emphasized strikingly the close relation between the respiratory type and pelvic health and the part which gravity may play in altering them. In order to show this more clearly, I may quote from Dr. Howell's physiology to refresh our memories on the subject of the circulation:

"When an animal, accustomed to go on all fours, is held in a vertical position, the great vascular area of the abdomen is placed under an increased pressure due to gravity, and unless there is compensatory contraction of the arterioles or of the abdominal wall, so much blood may accumulate in this portion of the system that the arterial pressure in the aorta will fall markedly or the circulation may stop entirely. In most cases compensation takes place, and no serious change in the circulation results. In rabbits, however, which have lax abdominal walls, it is said that the animal may be killed by simply holding it in the erect position for some time. For the same reason an erect posture in man may be dangerous when compensatory nervous reflexes controlling the arteries and tone of the abdominal wall are thrown out of action, as for instance, in a faint or in a condition of anesthesia."¹¹

Let me also call to mind the well-known anatomical fact of the very abundant supply of blood in the pelvic organs and the arrangement of the tortuous arteries and veins which favor the physiological congestion of these organs at the time of menstruation. And it must not be forgotten that the vena cava inferior is without valves, which makes it the easier for this column of blood to be hindered by gravity in its flow back to the heart. Nor should the existence of a negative pressure in the thorax be overlooked. Thus the thoracic portion of the vena cava inferior is under less pressure than the abdominal portion. To quote Dr. Howell:

"At each inspiration blood is 'sucked' from the extra-thoracic into the intra-thoracic veins. So far as the vena cava is concerned, the effect is augmented by the simultaneous increase in abdominal pressure. For as the diaphragm descends it raises the pressure in the abdomen as it lowers the pressure in the thorax. The two factors co-operate in forcing more blood from the abdominal into the thoracic cava."¹²

The relation between these physiological facts and the fashion of clothing for women may now be considered. At puberty girls are put into corsets, tight bands, and heavy, unsupported skirts which interfere with the respiratory movements, lessening the action of the diaphragm, rendering the abdominal muscles flabby and inefficient, in some cases changing the type of respiration from abdominal to costal. Thus arise conditions which promote excessive abdominal and pelvic congestion. This in turn changes the physiological periodic congestion of the normal menstrual flow into a chronic congestion which, if not pathological and the beginning of inflammatory processes, certainly prolongs unduly the menstrual flow. When we remember, moreover, that the blood which is lost is just as good as the blood remaining, and represents just so much potential energy, we need not be astonished that women have discomforts and are inefficient, nor that girls are pale and anemic.

The results of deficient muscular development are no less injurious than those of improper clothing. As the diaphragm descends the abdominal muscles

are relaxed, increasing the size of the abdominal cavity to permit the descent of the contents, and normally there is no undue thrust downward on the pelvic contents. With the squeezing of the abdominal contents by the contraction of the abdominal muscles, more blood is forced from the abdominal cava into the thoracic portion. Furthermore, since these abdominal muscles play an important part in child-birth, they should be as strong and efficient as possible. Nor is this all: they are an essential part in the support of the kidneys in their normal position, and the miseries of a misplaced kidney are not infrequently called dysmenorrhea. Here is certainly a very strong argument for the muscular development of girls and women and for a rational fashion of dress.

As to the duration of the menstrual flow there is considerable discrepancy among different observers, but it is usually given as from four to seven days. The duration of flow should be estimated for the time during which there is any show of color. There is a lack of uniformity and understanding in answering this question. Some women give the number of days during which there is much flow, others the number of days during which there is any show of color.

The following table, taken from Kelly, is reprinted that it may be compared with Table II, which also shows the duration of menstruation in 130 average women. (See Table No. I.)

A comparison of Table I of Dr. Kelly's cases, and Table II of my own cases, suggests that the shortest menstrual periods (1 or 2 days) in Table I were due to women giving only the days of principal flow instead of the total duration.

Table II, although made on the basis of single observations, is sufficiently accurate to show that the menstrual period is too much prolonged in the majority of cases. In these 130 average women the main flow is over in from two to three days, while the congestion and consequent bleeding is prolonged to four, five, six and even eight days. If this condition (which is not found in uncivilized races) can be remedied even partly by getting women into loose dress, by giving them in a recumbent position deep breathing during the menstrual period, thus counteracting the effects of constriction and gravity, and by developing their muscles in the intermenstrual period, it will be of manifold advantage both to the individual woman and to the race.

It could be no advantage to the organism to have the flushing of a muscle prolonged beyond its need for action, for rebuilding and carrying off its waste; nor to keep the digestive organs full of blood beyond the period of activity. It must then be equally undesirable for the uterus to be kept in a condition of chronic congestion. There can be no doubt that it is more physiological to have the uterine congestion and flow confined within definite limits, for the slight show of color prolonged for several days (Table II) represents congestion beyond the period of proper functioning. (See Table No. II.)

In a group of average women I have produced a marked improvement at the menstrual period by using so simple a measure as deep breathing. All constricting dress having been removed, the women,

in the recumbent position and with knees flexed to relax the abdominal muscles, have done deep breathing once or twice a day during the menstrual period, with the result that all pelvic sensations, depressions and minor symptoms usually included in the term dysmenorrhea have disappeared. In a number of cases also the period has been shortened more nearly to conform to the period of principal flow. These experiments will be presented in detail in a later paper.

These experiments tend to emphasize still fur-

TABLE I.

Showing Duration of Menstruation in 1000 Cases (from Kelly). ¹³	
1 day.....	15
1-3 days.....	15
2 days.....	36
2-4 days.....	59
3 days.....	105
3-5 days.....	85
4 days.....	115
4-6 days.....	112
5 days.....	136
5-7 days.....	83
6 days.....	68
6-8 days.....	37
7 days.....	122
7-8 days.....	12
Total.....	1000

TABLE II.

Duration of Menstrual Flow (130 Cases), Arranged to Show the Relation Between Total Duration, Main Flow and Prolonged Flow.

Total duration of flow in days.	No. of cases.	No. of days on which flow amounts to considerable.	No. of cases.	Diff. in days between total flow and main flow, i. e. prolonged flow.
3	7	1 1½	1	2
3½	1	2 ½	1	1½
3 to 4	5	2 ½	2	1 ½
3 to 5	1	2 ½	1	1 to 2
3 to 6	1	2 ½	1	1
4	23	2 ½ to 3	1	0-1
4 to 5	17	3	1	0-2
5	42	3 to 4	1	2
5 to 6	8	3 to 4	1	2½
5 to 7	1	3 to 4	1	1 to 2
6	15	3 to 4	1	3 to 4
6 to 7	1	3 to 4	1	2 to 3
6 to 8	1	3 to 4	1	2 to 3
7	6	3 to 4	1	3 to 4
8	1	3 to 4	1	3 to 4
Total cases	130		130	

ther that the upright position, the force of gravitation and constricting dress are conjoined factors in hindering the circulation of the blood from the pelvis to the heart, and are therefore important factors also in producing dysmenorrhea. Since in women of the uncivilized races we find the minimum of flow with no disability and perfect functioning, there can be no danger in gradually lessening by such physiological methods the period of prolonged pelvic congestion.

In a recent report¹⁴ on operations for dysmenorrhea, Dr. Norris and Dr. Barnard call attention to the importance of determining the causes of dysmenorrhea. Among the cases cited are the following:

	Cured permanently	Not cured	Temporarily cured
10 cases digestive dysmenorrhea	0	8	2
7 cases spastic and congestive symptoms combined	3	3	1

If we assume that the temporary improvement in three cases was the result of the psychological effect of the operation, we conclude that out of 17 operations for dysmenorrhea 14 were unsuccessful and were therefore unnecessary. Such digestive and congestive dysmenorrheas might possibly be interpreted as due to altered blood pressure and treated as such without operation. As long ago as 1892-6 a number of the leading gynecological surgeons urged conservatism in removing the ovaries of women, a custom then quite too prevalent.¹⁵ The first step toward a more conservative action in regard to the treatment of dysmenorrhea was made when a great gynecological surgeon wrote a medical gynecology in which hygiene, clothing, muscular development, etc., were strongly emphasized.

As early as 1894 Kelly urged the importance of the general practitioner recognizing "the purely hysterical" cases of dysmenorrhea, in whom local treatment of any kind is positively injurious. He also calls attention to the type of dysmenorrhea due to chlorosis,¹⁶ and to the "hysterical and neurotic" type, by whom moderate pain is described as agony. I have frequently found that women think they ought to have pain to be normal, and describe what may be properly called "pelvic consciousness" as pain. This has been carefully noted in my records as a separate group, and is probably due to blood pressure.

The preliminary fall in blood pressure¹⁷ which precedes the main fall in general blood pressure, which occurs from 5 to 7 days before the menstrual flow, and which is an abrupt drop and an abrupt return to the mean average pressure, is often associated in a certain number of women with pelvic consciousness, which causes the women to think the menstrual period is coming. This preliminary drop may be the basis for the unexplained "intermenstrual pain."¹⁸ The periodic drop in blood pressure which is common to both men and women is probably a sexual rhythm. It is not a menstrual rhythm, as has been shown.

Menstruation is but one small part of the activity of the reproductive machinery. Because it is an obvious function, everything occurring at or near

the time of this periodic flow of blood from the uterus of the woman has been referred to this function. A new and more limited view of menstruation must come. The fundamental conception of a periodic activity of the reproductive system in both men and women must take its place, and the physiological processes and the attending sensory disturbances in both sexes should be referred to the fundamental sexual rhythm, not to some one small part or expression of this activity in one sex. If there be an internal secretion which generates the sexual rhythm, then it will be found not only in the female but also in the male. Menstruation in woman, with its own disturbances and the coincident functional disturbances in other organs due to the lowered general blood pressure, have been greatly exaggerated by the bad hygiene of women. Physiological congestion is being prolonged unduly until it borders on the pathological. This condition, which is favored by the upright position, has resulted from the lack of muscular development and from constricting dress, changing the type of respiration or at least seriously interfering with the descent of the diaphragm, and rendering the abdominal muscles flabby and inefficient. Bad posture¹⁹ which tends to support the rectum favors the development of constipation and alters the support of the uterus, making displacement easier. It deprives the bowel of the favoring effect of gravity on the waste and increases the unfavorable effect of gravity on the uterus.

In the emphasis and exaggeration of this one expression of the sexual activity of woman, her efficiency has been lessened and we have lost sight of the common biological basis of life. What the race needs is not undue emphasis of the sexual characters, but better and more efficient all-round perfect-functioning human beings.

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3. Mary Putnam Jacobi, "The Question of Rest for Women," pp. 5-6.

4. Kelly, H. A., Medical Gynecology, 1908, p. 91.

5. Howell, W. H., Text Book of Physiology, 1897, p. 841.

6. Dr. H. A. Kelly's Medical Gynecology, pp. 66-67.

7. See Johns Hopkins Hospital Bulletin, Vol. XII, p. 179. 1901.

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11. Howell, Text Book of Physiology, p. 466.

12. Howell, Text Book of Physiology, p. 588.

13. Kelly, H. A., Medical Gynecology, p. 84.

14. Norris and Barnard, Dysmenorrhea in Nulliparous Women, Journ. Amer. Med. Assoc., May, 1910, p. 2003.

15. Kelly, Dr. H. A., in "Conservatism in Ovariectomy," Journ. Am. Med. Assoc., Feb. 8, 1896, quotes Dr. Wm. Polk (N. Y.), Dr. E. C. Dudley (Chicago), Dr. Cornelius Kollock, Dr. Wm. Goodell, Dr. Archibald MacLaren, Dr. Charlotte Brown, Dr. Robert A. Murray, Dr. B. McMonagle, Dr. B. F. Baer, Dr. Matthaël.

16. Dr. H. A. Kelly, "Dysmenorrhea," N. Y. Med. Soc., Feb. 6, 1894.

17. Mosher, C. D., Johns Hopkins Hospital Bulletin, pp. 178, 179, Vol. XII, 1901.

18. Kelly, H. A., Med. Gynecology, p. 118.

19. Mosher, Dr. Eliza M., "Habits of Posture a Cause of Displacement of the Uterus." In Women's Med. Journ., Vol. XIX, No. 12, p. 245.

THE RELATION OF GASTRIC HEMORRHAGE TO CHRONIC APPENDICITIS.*

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Formerly in operations upon the stomach, gastro-enterostomies were frequently made notwithstanding the fact that organic disease was absent. These operations were performed in the belief that the symptoms from which the patient was suffering would be relieved; occasionally, when an operation was carried out for the relief of gastric hemorrhage that had been complicated with pain and hyperacidity, the stomach when exposed was found quite free from perceptible involvement. It was particularly in this class of cases that the anastomosis would be made even in the absence of lesion, and harm instead of benefit was frequently the consequence. The end results of these operations were so unsatisfactory, that it soon became evident that they were not to be performed without specific indications. In cases where these indications were not observed, the persistent vomiting of bile was a frequent consequence and resulted from the so-called vicious circle; besides the operation left the symptoms—pain, hyperacidity and hemorrhage—uninfluenced.

The consensus of opinion at the present time is that ulcers should be excised whenever feasible; that an operation for hemorrhage should not be performed until medical measures have proven futile, and that the thin, dilated, toneless stomach should not be made the object of surgical interference. Furthermore, when the diagnosis of organic disease of the stomach is made and is not confirmed at operation, the stomach should not be disturbed, but the abdomen should be closed if no lesion is demonstrable.

The following history will serve as a type of the class of patients referred to:

A. B., age 35 years.—There was a marked neurotic history and the patient has always complained as far back as she can remember. She has borne two children and her pregnancies have been without incident. Subsequently she developed a marked diastasis recti associated with a general visceral ptosis. She gave a history of hyperacidity of the stomach contents, pain in the epigastrium, frequent vomiting and occasional haematemesis. The stomach was distinctly dilated and the patient would vomit food occasionally that she had eaten the day before. The diagnosis seemed easy to make,—a gastric ulcer that had produced a narrowing of the pylorus and consequent stasis.

At the exploration, a thin, dilated stomach was found, but there was no evidence of organic disease. A Finney operation was performed on account of the symptoms. Immediately after the operation the patient began to vomit bile, which persisted for months to such a degree that it became necessary, one year later, to reopen the abdomen.

* Cooper College Science Club, April, 1910.